

REMARKS

In response to the Official Action mailed September 6, 2002, Applicants amend their application and request reconsideration. No claims are added or cancelled so that claims 1-10 remain pending.

An Information Disclosure Statement citing three publications was submitted with the patent application when filed. However, the Official Action makes no reference to this Information Disclosure Statement. Acknowledgment of consideration of the three submitted publications in the next Official Action is respectfully requested.

The drawings were objected to as allegedly not illustrating steps of the invention. This objection is erroneous and should not be maintained. Between the steps ST4 and ST5 illustrated in Figure 1 of the patent application, the cross-linked layer 4, i.e., the cured thin film of the curable resin, is formed. Thereafter, in the events that occur and are indicated by the differences between ST5 and ST6 of Figure 1, the remaining part of the curable resin 2 (see ST4) is removed, leaving in place the cured thin film of the curable resin. These figures clearly illustrate every step of the fundamental process described in claim 1. Therefore, the objection to the drawings should be withdrawn.

Claim 1 and the other claims allegedly examined were rejected as unsupported by the patent application as filed and as indefinite pursuant to 35 U.S.C. 112, first and second paragraphs. The Examiner asserted that the claims were vague, indefinite, awkward, and confusing. Applicants respectfully disagree with this harsh assessment and request that the claim be read in combination with the description of the invention appearing in the patent application beginning at page 9, line 1 and continuing through page 12, line 15. That description clearly distinguishes between a cured thin film of a curable resin and the curable resin itself. The comments concerning the claims suggest that this distinction may not have been made in studying claim 1.

In order to advance the prosecution, claim 1 is modestly amended. No new matter is introduced and amended claim 1 is fully supported by the original disclosure. The only other amendment made is with regard to claim 10, a claim that the Examiner asserts pertains to a different species. That Amendment is only made for the purposes of clarification.

In view of the absence of any substantive amendment of any claim and, in fact, of any essential clarification of the claims, claims 1-3 and 6-8 should now be examined on the merits. Since there has not yet been an examination on the merits, if the claims are not allowed, any Official Action should not be a final rejection. Moreover, upon allowance of claim 1, all other pending claims should be rejoined to prosecution.

In re Appln. of Toyoshima et al.  
Application No. 09/738,855

A favorable Action is earnestly solicited.

Respectfully submitted,



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Date: November 15, 2002  
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PATENT  
Attorney Docket No. 400846/MELCO

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

TOYOSHIMA et al.

Application No. 09/738,855

Art Unit: 3729

Filed: December 18, 2000

Examiner: R. Chang

For: METHOD OF PRODUCING A  
MULTI-LAYERED WIRING  
BOARD

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**AMENDMENTS TO SPECIFICATION, CLAIMS, AND ABSTRACT  
MADE IN RESPONSE TO OFFICE ACTION DATED SEPTEMBER 6, 2002**

*Amendments to existing claims:*

1. (Amended) A method of producing a multi-layered wiring board comprising:  
forming an insulating layer of a photosensitive resin on a substrate ~~for forming multi-layered wiring~~, and exposing and developing said insulating layer to form holes having ~~a size~~ respective sizes in said insulating layer;

depositing a curable resin onto said insulating layer having the holes and filling the holes, and heating said curable resin to form a cured thin film of said curable resin ~~on at an interface of~~ said insulating layer and said curable resin; and

removing said curable resin, ~~leaving but not~~ said cured thin film and of said curable resin, leaving via-holes having a where the holes were made in said insulating layer, the via-holes being smaller in size reduced by than the holes due to said cured thin film from the size of remaining in the holes on said insulating film.

10. (Twice Amended) The method of producing a multi-layered wiring board including a plurality of stages of via-holes formed by repeating the process of claim 1, wherein the via-holes of ~~upper stages later-formed stages~~ are more reduced smaller in size than the via-holes of ~~lower earlier formed~~ stages.